



Hidden Lake Pump Station and Sewer Improvement Project - Update

King County to replace aging wastewater facilities in Shoreline

The King County Wastewater Treatment Division protects public health and the environment by conveying and treating our region's wastewater. Many of King County's sewers and wastewater pump stations are more than 30 years old and need to be upgraded to ensure reliable operation. Some facilities also must be expanded to serve our region's growing population.

King County's Hidden Lake Pump Station serves part of the City of Shoreline and collects sewage from the Ronald Wastewater District and Highlands Sewer District. The pump station sends sewage north through the Boeing Creek Trunk Sewer to the Richmond Beach Pump Station and on to the City of Edmonds' wastewater treatment plant. King County has an agreement with Edmonds in which the city treats some county flows in exchange for the county treating some city flows.

Replace Pump Station and Sewer

King County has determined it must replace the Hidden Lake Pump Station and part of the Boeing Creek Trunk Sewer and build a new storage pipe.

The pump station, located on the corner of 10th Avenue Northwest and Northwest Innis Arden Way in Shoreline, is nearly 40 years old. The existing station has operating problems and is under capacity. The station does not meet current King County pump station design standards, including odor and noise control standards. These problems cause about three overflows per year into Puget Sound.

Sections of the Boeing Creek Trunk Sewer are also in poor condition and under capacity. Some corroded sections of the sewer have been relined.

While relining restored the sewer's condition, it also reduced its capacity. The corrosion has continued to occur. Concrete in some sections of pipe has corroded down to the steel reinforcing. The corrosion is caused by hydrogen sulfide that is produced by bacterial activity in the sewage and is also a source of odors. During a 2001 storm, sewage backed up through a manhole onto the street and flowed into a garage. Two other houses had sewage back up in basements. King County has also received odor complaints from several locations along the sewer line.

Project Goals

King County's goals for the Hidden Lake Sewer Improvement Project include the following:

- Address critical capacity needs.
- Reduce sewage backups into homes.
- Reduce overflows into Puget Sound.
- Minimize impacts on the community and the environment.
- Look for opportunities to partner with other agencies to reduce impacts and costs.
- Provide opportunities for public input.

The new Hidden Lake facilities will be more reliable and have higher capacity to better serve the community.

Hidden Lake Project Description

King County's Hidden Lake facilities will have more capacity and be more reliable to better serve the community.

The map at right shows the planned improvements. Design and permitting work will be completed in 2004, and construction will run from late 2004 (or early 2005) through 2006.

King County will probably issue a separate construction contract for each of the three project elements shown on the map. That means work on all three elements may take place at the same time.

Boeing Creek Trunk Sewer Replacement

About 12,000 feet of the Boeing Creek Trunk Sewer will be replaced. The sewer will be built in sections about 200 feet long. In each section, the contractor will dig a trench to install new sewer pipes that are 15 to 30 inches in diameter. In other words, the entire 12,000 feet of sewer will **not** be under construction at one time. Work will be completed in one section and then advance to the next section. Most work will take place in the street right of way. Traffic control signs and flaggers will direct vehicles safely through the work area. Streets will be restored after construction ends.

Underground Storage Pipe

The new underground wastewater storage pipe will temporarily store wastewater during peak storms. The new storage pipe will be in Boeing Creek Park under and next to the city's existing stormwater facility. The pipe will also replace an existing 24-inch sewer in Boeing Creek Park owned by the Ronald Wastewater District. The new sewer will be 12 feet in diameter and about 640 feet long. The county will also replace 1,000 feet of smaller pipe in the street near the park

We selected this location after detailed analysis of many storage alternatives and consultation with the city. The city plans to improve its existing stormwater facility and make park improvements.

Coordinating construction of the city and county projects will reduce the intensity and duration of impacts and may reduce costs. Working in the park will minimize traffic impacts and street closures. We will also maintain access to the park during construction. The park will be restored after construction ends for both projects.

Hidden Lake Pump Station

The new Hidden Lake Pump Station will be built on King County's property next to the existing pump station. The pumping capacity will be increased from 4.3 to 6.8 million gallons per day (mgd). The new pump station will meet the county's current design standards, including noise and odor control, and will have greater capacity to meet local needs. Public comment has influenced the design of the pump station and landscaping.

Construction of the facility, which includes one underground floor, will take 18 months to two years. The existing pump station will remain in operation during construction.

Your comments and ideas are needed

King County is committed to being a good neighbor. We are working directly with the community throughout the project to ensure that suggestions and concerns are addressed. We began to identify potential community and environmental impacts—and ways to minimize them—early in the design process. This work will continue during environmental review, permitting, construction, and long-term operations and maintenance of the facilities.

***Construction work
will run from late 2004 to 2006.***

Hidden Lake Pump Station and Sewer Improvement Project

1 Replace Part of the Boeing Creek Trunk Sewer

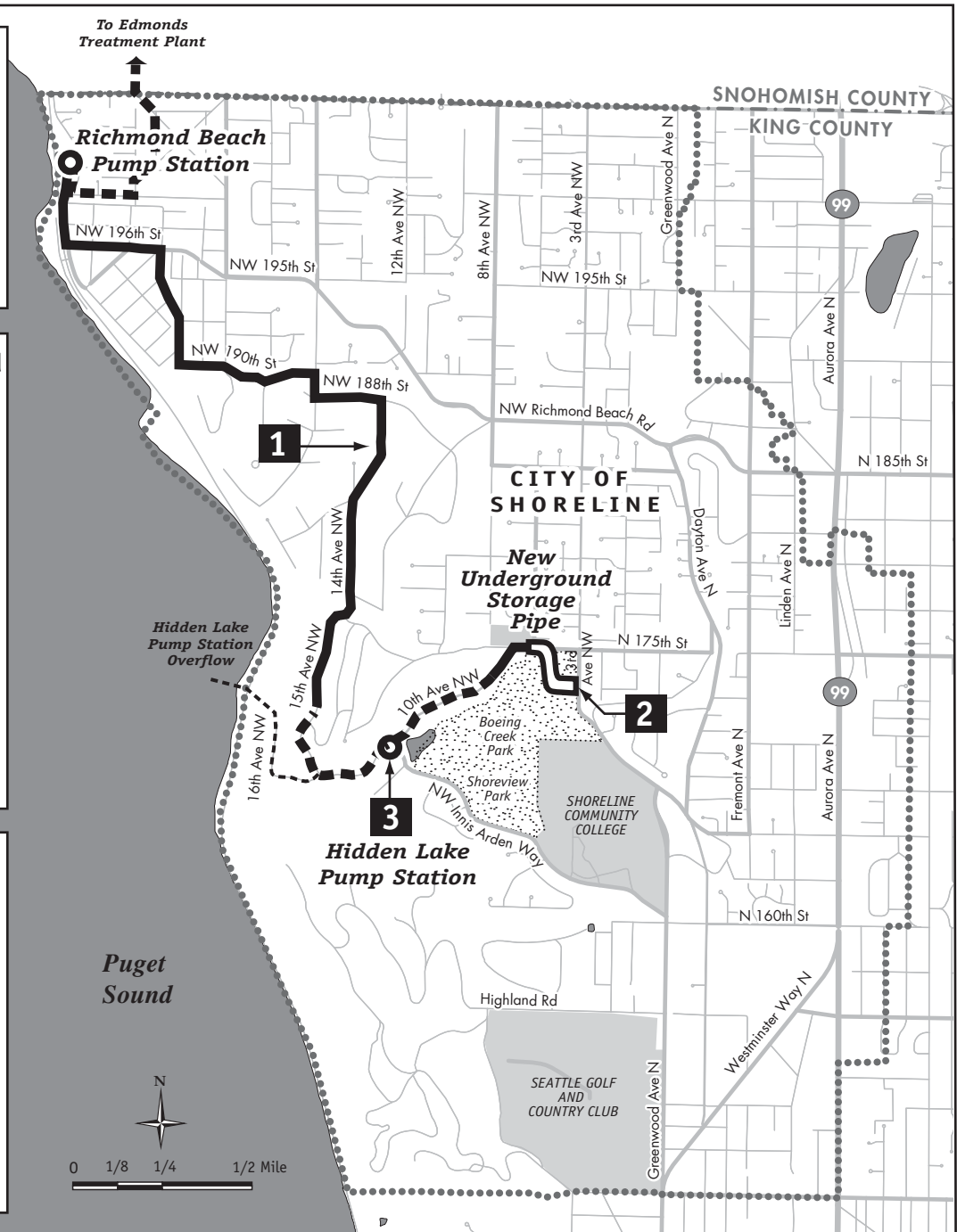
- Use current route.
- Replace about 12,000 feet of sewer, including corroded pipe.
- Improve odor control in problem areas.

2 Build a New Underground Storage Pipe

- Build a 500,000-gallon pipe in Boeing Creek Park.
- Locate the pipe under and next to the city's existing stormwater facility.
- Coordinate construction with enlarging the city's stormwater project.
- Replace about 1,000 feet of pipe in the street.
- Restore street and park after construction ends.

3 Replace Hidden Lake Pump Station

- Use the existing site.
- Increase the pumping capacity from 4.3 million gallons per day to 6.8 mgd.
- Design building and landscape to fit the community.
- Select equipment to optimize system operation and reduce odors and noise.



1 Project Component and Number

— Road

..... Richmond Beach Wastewater Service Area

- - - - - Overflow to Puget Sound

--- Existing Sewer Line

— Boeing Creek Trunk Sewer Line Replacement Area

Water body



King County

Department of
Natural Resources and Parks

Wastewater Treatment Division

Public Information and Involvement Opportunities

For more information on the Hidden Lake project:

- Call Jennifer Kauffman at 206-263-6029 for more information and answers to your questions and concerns.
- Request updates through e-mail by sending a message to jennifer.kauffman@metrokc.gov.
- Ask to be added to the Hidden Lake mailing list for project updates and meeting invitations.
- Visit our web site for additional wastewater information: <http://dnr.metrokc.gov/wtd/projects/hiddenlake.htm>.

It's easy to get more information about this and other wastewater projects. Just call, e-mail or check out our Web sites!

Find out more about removing clean water from sewers!

Clean water that flows into sewer pipes from groundwater (infiltration) and stormwater (inflow) is called infiltration and inflow or I/I. I/I enters sewers through cracks in pipes, improperly connected downspouts, and other sources. I/I contributes to overflows into Puget Sound by taking up capacity in the sewer system. Handling I/I at a treatment plant is expensive because this clean water must be treated like sewage.

Under a separate project, Ronald Wastewater District and King County are working together to evaluate ways to remove clean water from sewers in an area just south of Shoreline Community College. We will use results of the I/I pilot project to determine if removal of I/I in the rest of the area could save enough capacity to avoid the need for or reduce the size of any new facilities in the future.

- Learn about Ronald's I/I removal pilot project and King County's Regional I/I Control Program on the county's Web Site <http://dnr.metrokc.gov/wtd/i-i/pilots/RonaldPilot>.
- For questions about the Ronald Wastewater District, its pilot project, and the public meetings, contact Mike Derrick at Ronald Wastewater District, 206-546-2494 or mderrick@ronaldwastewater.org.



King County

Department of Natural Resources and Parks
Wastewater Treatment Division
King Street Center
201 South Jackson Street, Suite 505
MS KSC-NR-0505
Seattle, WA 98104-3855

Available in alternative formats
206-263-6029 or TTY Relay: 711